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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/923,373 | 08/08/2001 | Koichi Kanno | 396.40469X00 | 8927 |

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EXAMINER

NGUYEN, TAM M

ART UNIT PAPER NUMBER

1764

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,373

Applicant(s)

KANNO ET AL

Examiner

Tam M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 8, 10-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 8, 10-12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 14, 2005 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 8, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto (JP-01-282346) in view of Mochida et al. (4,891,126), Orac et al. (5,843,298), and Hayner (6,153,004).

Matsumoto discloses a process for producing a pitch composition by mixing a mesophase pitch with a coal tar pitch in a ratio of from 5/95 to 95/5. The mixed pitch is then heated (carbonization treatment) to a temperature of from 800 to 1700° C. The treated pitch of Matsumoto is graphitized at a temperature of from 1500° C to 2500° C. It is known that in carbonization treatment, coke is produced. The mixed pitch has an optically anisotropic content of at least 80 vol. %. (See page 3, lines 17-24; page 4, lines 25-32; page 5, line 27)

Claims 8 and 14:

Matsumoto does not disclose the step of producing the mesophase pitch as claimed.

Mochida discloses that a mesophase pitch is produced by polymerizing a condensed polycyclic hydrocarbon in the presence of hydrogen fluoride-boron trifluoride. (See abstract; col. 5, line 49-52)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Matsumoto by producing a mesophase pitch as taught by Mochida because such method is effective to produce a mesophase pitch containing an optically anisotropic phase.

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Claims 8 and 14:

Matsumoto does not specifically disclose that the coal tar pitch contains substantially no quinoline insolubles (QI).

Orac discloses a process for producing a coal tar pitch which contains substantially no quinoline insolubles. (See abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Matsumoto by using the coal tar pitch from the process of Orac because, in the Matsumoto process, one of skill in the art would use any coal tar pitch including the pitch from the Orac process and with the expectation that the results would be the same or similar because of the similarities between the Matsumoto coal tar pitch and the Orac Pitch.

Claims 8, 10 and 14:

Matsumoto does not disclose the step of mixing 100 parts of the pitch composition with 0.1 to 100 parts of sulfur.

Hayner discloses that it is known to improve a pitch's properties by adding 6-14 wt.% of sulfur to the pitch. (See col. 2, line 66 through col. 3, line 7)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Matsumoto by adding sulfur to the pitch composition as taught by Hayner because adding sulfur to the pitch would increase viscosity and reduce the melting point of the pitch. Claim 2:

The mesophase pitch has a softening point of 220-300° C. Since the Matsumoto mixed pitch is similar to the claimed pitch composition and the Matsumoto pitched is subjected to a

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carbonization treatment at a temperature 800 to 1700° C as claimed, it would be expected that the carbonization treatment of the Matsumoto pitch would have a carbonization yield of 70 % or higher. (page 4, lines 25-32)

Matsumoto does not specifically disclose that the softening point of the pitch is measured by an elevation flow tester method.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Matsumoto by using the claimed testing method because one of skill in the art would use any testing method because it would be expected that any testing method including the claimed method would result in the reading of the softening point of the Matsumoto pitch in the range of 220-300° C.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 14 above, and further in view of Ryu et al. (6,521,380).

Matsumoto does not specifically disclose that the carbonaceous material (coke) is pulverized before graphitizing.

Ryu discloses a process of graphitizing carbonaceous material wherein the carbonaceous material is pulverized before graphitizing. (See col. 3, lines 50-56)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Matsumoto by pulverizing the carbonaceous material as taught by Ryu because one of skill in the art would pulverize the carbonaceous material before the graphitizing step because the pulverizing step of Ryu is effective to produce graphitized fiber to produce negative electrode.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764


3/29/05

TN